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Commercial Relationships Disclosure (Abstract): Arnulf Myklebust: Commercial Relationship: Code N (No Commercial Relationship) | Patricia Riddell: Commercial Relationship: Code N (No Commercial Relationship)

Study Group: (none)

ABSTRACT

TITLE: Visual characteristics of high-functioning premature children

ABSTRACT BODY:

Purpose:

While prematurity can result in major visual deficits (e.g. through retinopathy of prematurity), many premature children with seemingly good acuity struggle at school. This study evaluates more functional aspects of vision that might interfere with learning.

Methods: A series of visual functions, and cognitive skills were evaluated in a cross-sectional case-/control-study of children aged 5 to 10 years. The control group consisted of typical Norwegian children (n= 87), and developmental trajectories were created for the series of functions. This group was then compared to a group of premature children (n= 37), of whom a majority (n= 25) came from an established cohort of extremely premature children from the National Hospital in Oslo. Children who were not attending or going to attend normal public education in Norway were excluded from the study. A factor analysis was performed to reduce the number of measures to latent variables which discriminated between groups ($p < .05$; by ANCOVAs) .

Results: As predicted, there were no significant differences between premature and control children for the most common (typical) measures of vision. Results show, however, that other visual functions were generally weaker in the premature group. Deficiencies found in this group were found to generate two patterns of deficits: A Planar component that can be related to close work on screen or paper, and a Depth component that relates to accommodation and binocular functions. These two patterns were found to account for 66.6% of the total variance in our data.

Conclusions: Premature children were found to have specific patterns of deficits in higher-level visual functions. More comprehensive visual examinations of these functions, and interventions designed to treat these deficiencies could lead to improved learning abilities in premature children.

(No Image Selected)

DETAILS

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AWARDS:

AFFIRMATIONS

Affirmations: Affirmation to present same work as abstract submission.

Affirmations: Affirmation that abstract data/conclusions have not been published; not redundant with other submissions from same investigators.

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